



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,068	10/21/2004	Manabu Abe	XA-10199	8611

181 7590 12/07/2006

MILES & STOCKBRIDGE PC
1751 PINNACLE DRIVE
SUITE 500
MCLEAN, VA 22102-3833

EXAMINER

ARCE DIAZ, MARLON A

ART UNIT	PAPER NUMBER
----------	--------------

3611

DATE MAILED: 12/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/512,068	Applicant(s) ABE ET AL.	
	Examiner Marlon A. Arce-Diaz	Art Unit 3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,11,13,15,17 is/are rejected.
- 7) ☒ Claim(s) 8,10,12,14,16 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see amendment, filed 9/20/06, with respect to the rejection(s) of claim(s) 1-6 under 35 U.S.C 103 in view of Kobayashi have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Oka (US Patent No 6,782,771).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oka (US Patent No 6,782,771) in view of Table H-2 from "mechanics of materials" by James M. Gere, Henceforth (the table). Oka discloses a joint and a steering assist system comprising: a motor (6) that has a moving shaft (60), said moving shaft is connected to an input shaft (4) through a deceleration mechanism (7) {{power transmission mechanism mentioned by applicant}}; an elastic member (83) located between the moving shaft (60) and a housing (fig 1); wherein the elastic member (83) is made of rubber or synthetic resin material, such as nylon or polyethylene. Oka fails to mention the young's modulus of the synthetic resin material. However, Table H-2 in Gere's book

Art Unit: 3611

shows that nylon and polyethylene have young's modulus comparable to the one mentioned in claim 1. It is obvious for someone skilled in the art to use a synthetic material such as nylon or polyethylene in the absorbing member mentioned by Oka, in order to have a working apparatus and to reduce vibrations as stated by Oka.

Regarding claim 2 and 3, Oka further discloses a metal member (81,82), the elastic member being placed in an axial direction on both faces of the metal member (fig 6).

4. Claims 7,9,11,13,15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oka (US Patent No 6,782,771) in view of Table in appendix B (pg 747) from "Mechanics of Materials" by Beer, Johnston and DeWolf, henceforth (the table). Oka discloses a joint and a steering assist system as mentioned above. Oka fails to mention the properties of the synthetic resin material (plastic). However, appendix B in the mechanics of materials book mentioned above discloses the properties of polyester elastomer as follows; E (modulus of elasticity), σ (strength or stress), $E = 200$ Mpa, while $\sigma = 40 - 45$. as mentioned by applicant in page 8 of the specification, $E = \sigma/\epsilon$, solving for ϵ

$\epsilon = \sigma/E$ and plugging the number in gives $\epsilon = 42/200 = 0.21$, which is within the range specified in claim 7. It would have been obvious for someone skilled in the art to use polyester elastomer as the synthetic material used in the elastic member used in Oka's invention. Regarding claim 9,13 and 17, it would be obvious to replace the synthetic material with polyurethane.

Art Unit: 3611

Allowable Subject Matter

5. Claims 8,10,12,14,16 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marlon A. Arce-Diaz whose telephone number is (571) 272-1341. The examiner can normally be reached on Mon-Fri 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on (571) 272-6651. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marlon Arce-Diaz
MAA

11/29/06



LESLIE D. MORRIS
PATENT EXAMINER
TECHNOLOGY CENTER 3600